

2.0 ACTIVITY FORECAST

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Cincinnati Municipal Airport, Lunken Field (LUK), (Airport), (Lunken) currently serves as a general aviation and corporate aviation facility and reliever airport to the Cincinnati/Northern Kentucky International Airport. For master planning purposes, it is assumed the Airport will continue in this role through the 20 year planning period, and facilities required to support this role will be identified. Through the years, the City has received various proposals to initiate limited scheduled commuter passenger service at the Airport. While none of these proposals has actually come to fruition, it is prudent in the master planning phase to assess the capability of the Airport to accommodate such traffic, and to identify impacts on access roadways; terminal building and landside facilities; aircraft parking and runway capacity impacts; and community noise levels. To establish the basis for this analysis, the forecast chapter includes in addition to the baseline forecast, an additional forecast scenario which projects the initiation of scheduled commuter passenger activity under the current FAA Part 139 certification using aircraft with fewer than 30¹ seats.

The forecasts were developed through analysis of recent trends in activity at Lunken Field, and trends in national general aviation activity. Historical growth rates were analyzed and compared to forecast growth rates to insure that the projections were reasonable. Also, conversations were held with several operators at the Airport to help explain various recent trends in activity. Trends in the national forecasts developed by the FAA were used for assumptions underlying the evolution of activity on different types of aircraft in general aviation. The FAA develops its estimates of such trends through conversations with various segments of the general aviation community. General aviation organizations representing aircraft manufacturers, business aviation operators, pleasure flyers, and flight schools meet with the FAA on a bi-annual basis to discuss the outlook for segments of the general aviation industry.

¹ Aircraft with fewer than sixty seats were used in the development of the long-term forecasts but only those aircraft with fewer than 30 seats are permitted to operate due to current airport policy.

The forecasts cover the short term (2002-2007), the intermediate term (2007-2012), and the long term (2012-2022).

In the baseline scenario, it is assumed that Lunken will continue to serve, primarily, general aviation and corporate aviation activities for the area. Corporate aviation, pleasure flying, flight training, small cargo operations (primarily supporting banking operations and the distribution/exchange of checks), and some air taxi activity will occur at the Airport throughout the forecast period.

This baseline scenario will include forecasts of general aviation operations, based aircraft, aircraft fleet mix, itinerant and local aircraft operations, charter and air taxi operations, and peak hour average day activity. A potential scenario involving scheduled passenger service is also presented. In this scenario, all of the general aviation activities are assumed to remain the same as in the base case, and passenger activities are hypothesized. The report is organized as follows:

- General Aviation Aircraft Operations
- The Number of Aircraft Based at Lunken Field
- Aircraft Operations Fleet Mix
- Based Aircraft Fleet Mix
- General Aviation Cargo
- Aircraft Operations Peaking
- Potential Scheduled Commuter Service
- Projections Summary

2.1 General Aviation Aircraft Operations

Historical and forecast baseline aircraft operations are presented in **Table 2-1**. This table lists Lunken and United States operations by category (Air Taxi/Charter, General Aviation and Military).

TABLE 2-1 Cincinnati Municipal Airport-Lunken Field HISTORICAL AND FORECAST ACTIVITY												
United States Total at FAA and Contract Towers					Lunken Field				Lunken Field Share of United States Total			
Fiscal	Air Taxi/ Charter	General Aviation	Military	Total	Air Taxi/ Charter	General Aviation	Military	Total	Air Taxi/ Charter	General Aviation	Military	Total
1990	8,235,905	35,293,519	2,526,423	46,055,847				175,559				0.381%
1991	9,042,978	38,910,962	2,581,890	50,535,830				142,643				0.282%
1992	9,461,960	38,354,750	2,877,955	50,694,665				129,715				0.256%
1993	9,831,829	36,600,990	2,728,486	49,161,305				115,057				0.234%
1994	10,175,527	36,253,861	2,584,640	49,014,028				126,545				0.258%
1995	10,234,157	35,926,520	2,612,362	48,773,039				116,102				0.238%
1996	10,170,380	35,298,290	2,546,934	48,015,604				117,242				0.244%
1997	10,053,785	36,833,396	2,523,641	49,410,822				118,178				0.239%
1998	10,172,153	38,046,632	2,781,508	51,000,293	6,269	111,929	383	118,581	0.062%	0.294%	0.014%	0.233%
1999	10,573,500	39,999,547	2,950,514	53,523,561	7,899	111,147	545	119,591	0.075%	0.278%	0.018%	0.223%
2000	10,760,550	39,878,536	2,887,994	53,527,080	8,933	120,100	376	129,409	0.083%	0.301%	0.013%	0.242%
2001	10,881,702	37,620,027	2,916,993	51,418,722	11,057	114,516	389	125,962	0.102%	0.304%	0.013%	0.245%
2002	11,029,500	37,575,400	3,062,200	51,667,100	12,479	119,457	278	132,214	0.113%	0.318%	0.009%	0.256%
Forecasts												
2007	12,995,400	39,931,000	3,085,400	56,011,800	20,406	128,129	419	148,954	0.157%	0.321%	0.014%	0.266%
2012	14,659,200	42,546,800	3,085,400	60,291,400	23,018	138,810	419	162,247	0.157%	0.326%	0.014%	0.269%
2022	17,291,828	48,174,882	3,085,400	68,552,110	27,152	160,171	419	187,742	0.157%	0.332%	0.014%	0.274%

Source Federal Aviation Administration

Cincinnati Municipal Airport, Lunken Field

* Lunken Part 150 Noise Study

PB Aviation

Note: Detailed Airport records were not available for periods prior to 1998.

Data from historic FAA 5010 annual activity survey forms by category of aircraft operations at Lunken Airport was reviewed for the 1980 – 2002 time period. From 1991 until 1997, air taxi/charter operations at Lunken represented less than 0.04 percent of total U.S. air taxi/charter activity. In 1998, Lunken activity in this category jumped to 0.062 percent of the national total, and has increased in share rapidly since then. This was due to increased corporate activity. Air taxi/charter operations have experienced strong growth at Lunken since 1998, even in light of the 2001 decline in general aviation activity. As a share of the nation's activity, this category at Lunken has grown from 0.06 percent in 1998 to 0.11 percent in 2002. Air taxi/charter activity has averaged 19 percent annual growth 1998-2002. The expected continued strength of this segment of aviation activity is reflected in the FAA's forecast of strong growth in United States air taxi/charter activity, 2.8 percent annually versus 2.2 percent for air carrier operations and only 1.3 percent annually for general aviation. As described in the following paragraphs, there are many different factors underlying this strong growth in air taxi/charter activity at Lunken.

Several of the corporate operators of aircraft at Lunken have started chartering their aircraft for use when the corporation is not using them. This practice increases aircraft utilization and reduces the overall cost of a corporation's aviation operation without increasing the number of based aircraft. It also increases the air taxi/charter activity at the Airport. Operators of air taxi service at the Airport are seeing continued strength in demand.

Therefore, the air taxi/charter category of aircraft activity at Lunken is forecast to remain strong through the planning period. It is forecast that the Airport will increase its share of United States' activity from 0.11 percent in 2002 to 0.157 percent in 2007. While the annual growth rates will decline somewhat, Lunken's share of United States' activity will still grow at over 10 percent annually from 2002 through 2007. This is consistent with the forecast that was developed for the FAR Part 150 Noise Study at Lunken.

Beyond 2007, air taxi/charter operations in the base case scenario are expected to grow at the same rate as the national forecast, generating over 27,000 annual operations by 2022. (Note: This baseline forecast element does not include potential scheduled commuter passenger service.)

Lunken Field general aviation operations in Table 2-1 represented over 0.45 percent of the U.S. total 1990-1992. This share fell below 0.40 percent subsequent to that. In the last three years, Lunken Field general aviation operations have leveled off at about 0.30 percent of the U.S. total. The 2002 level of operations represents a strong rebound from the decline in 2001, and also represents the third straight year of growth in Lunken's share of United States general aviation activity. General aviation activity at the Airport has grown at 1.6 percent annually since 1998. The 2007 general aviation forecast for Lunken Airport, the same as that in the recent FAR Part 150 Noise Study, represents an average annual growth of 1.4 percent annually, and a slight increase in share of the United States total. The FAA develops forecasts for all of the towered airports in the United States for its planning purposes. These are called Terminal Area Forecasts (TAF). The FAA develops these projections by distributing its annual United States forecasts among the various airports. The FAA's recent Terminal Area Forecast (TAF) for Lunken Field indicates that Lunken is expected to continue increasing its share of United States activity. The TAF forecast growth rate for general aviation operations at Lunken was applied to the 2007 forecast to generate a 2022 estimate of 160,171 general aviation aircraft operations. This is approximately 1.1 percent higher than the FAA's Terminal Area Forecast for general aviation operations at Lunken.

Military operations have declined since pre-1997 levels, and are forecast to remain at the 419 annual operations level projected in the FAR Part 150 Noise Study.

Total operations (excluding any scheduled commuter passenger operations) at Lunken in the base case are projected to be 187,742 by 2022. This represents

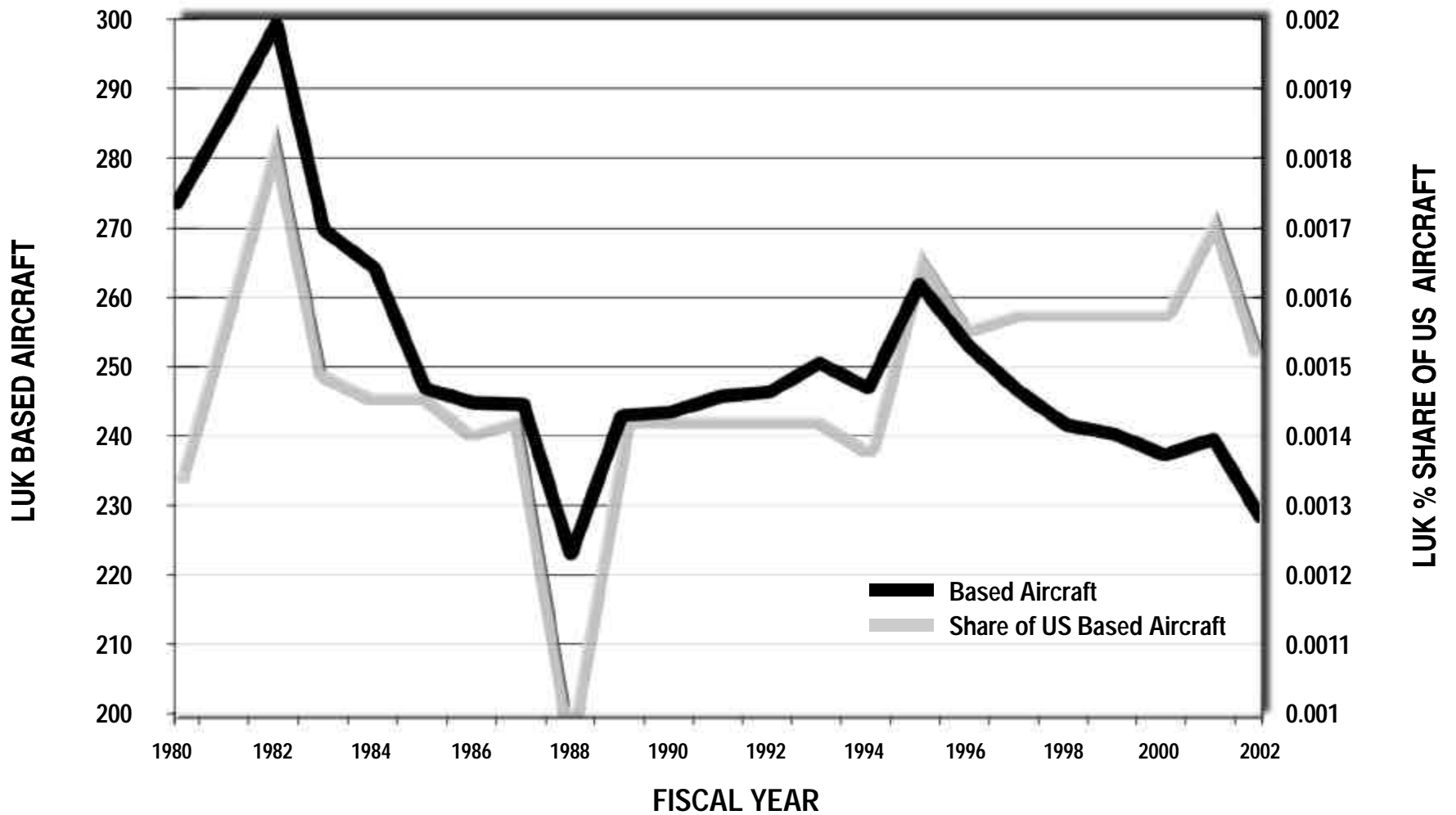
an average annual growth rate of 1.8 percent versus the recent 1998-2002 rate of 2.8 percent annually. This leveling off of the growth rates reflects similar behavior projected for the United States as a whole.

Historically, itinerant operations at Lunken have averaged 61 percent of total aircraft operations, while local aircraft operations have been 39 percent. This split is assumed to be constant through the forecast period.

2.2 The Number of Aircraft Based At Lunken Field

The last 20 years reflect a turbulent time in the national general aviation aircraft industry. In the 1980s, many general aviation aircraft in the fleet were aging and accidents with the aging aircraft were resulting in significant liability claims against aircraft manufacturers. This caused insurance rates to increase, and also discouraged many manufacturers from producing new general aviation aircraft. The industry saw a corresponding decline in aircraft activity. In 1994, President Clinton signed the General Aviation Recovery Act (GARA) limiting manufacturers' liability for aging general aviation aircraft. This set the stage for resurgence in the industry, from both the manufacturing and operations perspectives.

The number of aircraft based at Lunken historically, and Lunken's share of United States total general aviation aircraft are presented in **Exhibit 2-1**. In this figure, the number of aircraft based at the Airport is graphed against the left Y-axis in the figure. Lunken's share of United States based aircraft is graphed against the right Y-axis. The number of based aircraft has fluctuated between 200 and 300 since 1980 at the Airport. From a high of 285 based aircraft in 1982, Lunken based aircraft numbers leveled off at around 250-262 based aircraft 1990-2002. Since the signing of the GARA in 1994, Lunken's share of U.S. based aircraft has declined from a high of 0.161 percent in 1995 to a current share of 0.13 percent.



While ownership of aircraft in the country has rebounded since the signing of GARA, growth in the number of aircraft based at Lunken has not. **Exhibit 2-2** displays the calculated operations per based aircraft at LUK since 1980. This graphic indicates that operations per based aircraft have declined from ranges above 600 1980-1990, to a range of 450-500 in the 1990's. This change is driven by several factors. The predominant type of aircraft based at Lunken Field is single engine piston aircraft. This category of aircraft tends to be older than other types. Their primary use tends to be pleasure flying. FAA surveys have indicated that as an aircraft ages it usually flies fewer hours. Also, the business jet corporate fleet at Lunken has increased. These aircraft tend to represent fewer operations per aircraft than aircraft used for pleasure flying or training.

Based aircraft at Lunken were forecast using an operations per based aircraft estimate, with a share of United States based aircraft as a check for reasonableness. The FAA projects operations per based aircraft across the country to grow at 0.3 percent per year through the forecast period. Applying this growth to the operations per based aircraft of 505 experienced in 2002, and applying the resulting operations per based aircraft forecast to the operations projections, produces the forecast of based aircraft in **Table 2-2**. This based aircraft projection yields a Lunken based aircraft share of the U.S. consistent with its recent historical range. Lunken is projected to increase from 262 based aircraft in 2002 to 352 in 2022. This is a rate of 1.5 percent annually, or 4.5 aircraft per year.

2.3 Aircraft Operations Fleet Mix

(Includes no scheduled passenger commuter service activity)

The operational fleet mix at Lunken was estimated from data collected for the FAR Part 150 Noise Study. The 2002 operational mix is presented in **Table 2-3**. This fleet mix is projected based upon assumptions on hours and utilization of general aviation aircraft in the FAA's March 2003 Aerospace Forecasts. Single-

OPERATIONS PER BASED AIRCRAFT

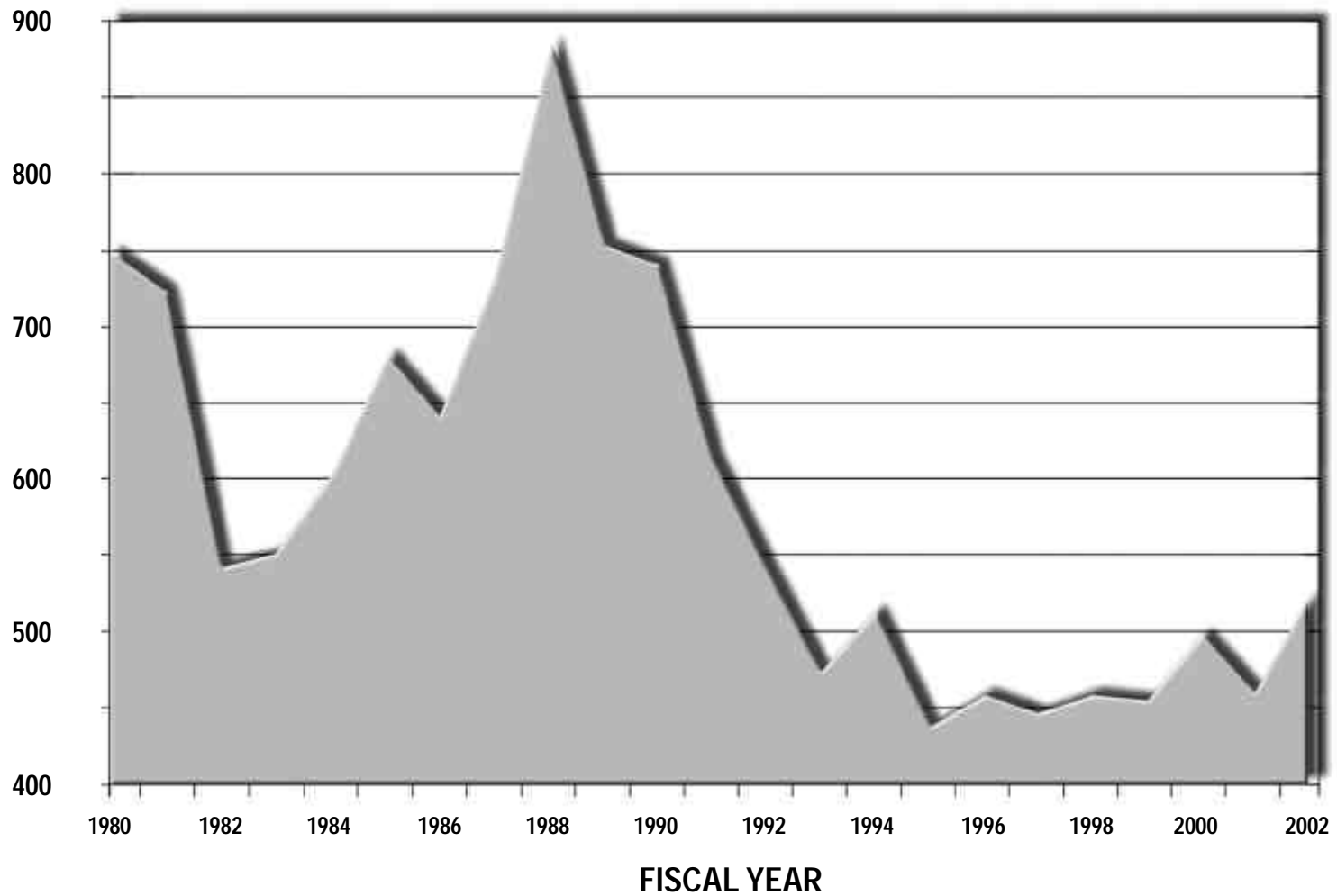


TABLE 2-2 Cincinnati Municipal Airport-Lunken Field HISTORICAL AND FORECAST BASED AIRCRAFT				
<u>Fiscal Year</u>	<u>Based Aircraft</u>	<u>Operations</u>	<u>Ops Per Based</u>	<u>Share of U.S. Based Aircraft</u>
1980	234	174,109	744	0.17%
1981	260	184,145	708	0.19%
1982	285	145,114	509	0.20%
1983	249	139,648	561	0.17%
1984	246	152,680	621	0.16%
1985	246	168,157	684	0.15%
1986	241	172,420	715	0.14%
1987	243	160,708	661	0.14%
1988	200	175,026	875	0.12%
1989	243	186,984	769	0.14%
1990	243	175,559	722	0.14%
1991	243	142,643	587	0.15%
1992	243	129,715	534	0.15%
1993	243	115,057	473	0.15%
1994	239	126,545	529	0.15%
1995	267	116,102	435	0.16%
1996	256	117,242	458	0.15%
1997	258	118,178	458	0.15%
1998	258	118,581	460	0.14%
1999	258	119,591	464	0.14%
2000	258	129,409	502	0.14%
2001	273	125,962	461	0.14%
2002	262	132,214	505	0.13%
Forecasts				
2007	291	148,954	512	0.14%
2012	313	162,247	519	0.15%
2022	352	187,742	533	0.15%

Source: Federal Aviation Administration
Cincinnati Municipal Airport, Lunken Field
PB Aviation

engine piston aircraft are projected to increase at a rate below one percent annually. Multi-engine piston activity is projected to be relatively constant over the forecast period. These low rates of growth are partly a result of the age of the piston fleet in the U.S. Generally, the piston fleet is older than any other general aviation aircraft, and utilization tends to be less for older equipment. Corporate flying and fractional ownership are factors that are driving this growth. Turboprop activity is projected to grow at a rate just below one percent annually. Jet aircraft exhibit the strongest growth in operations of any fleet type.

TABLE 2-3 Cincinnati Municipal Airport-Lunken Field OPERATIONS FLEET MIX FORECAST					
Forecast					
Equipment Type	2001	2002	2007	2012	2022
Single Engine Piston	70,287	71,802	80,709	82,132	85,052
Twin Engine Piston	18,894	20,212	21,094	21,094	21,094
Multi-Turbo	6,298	6,764	7,180	7,472	8,092
Business Jet	27,712	30,379	37,032	48,523	70,384
Helicopter	2,519	2,668	2,518	2,608	2,700
Military	252	389	419	419	419
Total	125,962	132,214	148,954	162,247	187,742
PERCENTAGE DISTRIBUTION					
	Sample	Estimated	Forecast		
Equipment Type	2001	2002	2007	2012	2022
Single Engine Piston	55.8%	54.3%	54.2%	50.6%	45.3%
Twin Engine Piston	15.0%	15.3%	14.2%	13.0%	11.2%
Multi-Turbo	5.0%	5.1%	4.8%	4.6%	4.3%
Business Jet	22.0%	23.0%	24.9%	29.9%	37.5%
Helicopter	2.0%	2.0%	1.7%	1.6%	1.4%
Military	0.2%	0.3%	0.3%	0.3%	0.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Cincinnati Municipal Airport, Lunken Field observations
 Federal Aviation Administration
 PB Aviation

Technological advances in small jet aircraft are making them less expensive to purchase and operate. This is also driving growth in this segment of general aviation activity. Jet operations are projected to increase 5.5 percent annually 2007 through 2012, and just below four percent annually thereafter. Helicopter operations are projected to increase just under one percent annually. By 2022, business jet activity at Lunken will increase from 22 percent of operations to 37.5 percent. Operations in all other categories are forecast to decline in share of Lunken activity.

2.4 Based Aircraft Fleet Mix

The fleet mix of based aircraft at Lunken was projected using the FAA's assumptions about the growth of the U.S. general aviation fleet as a guideline. The FAA made these assumptions based upon input from groups representing

business aviation, light aviation, and vertical flight. The prospects for the existing fleet, new production, and attrition are embodied in these assumptions.

The inventory phase of the master plan identified the 2002 fleet mix presented in **Table 2-4**. The largest element of the based aircraft fleet at Lunken in 2002 was single-engine piston aircraft, comprising 57.6 percent of the total. Business-type jet aircraft was the next largest group, with 22.9 percent of the total.

The FAA assumes that the multi-engine piston fleet will not grow over the forecast period, and that single-engine piston aircraft will increase at less than 1.0 percent per year. The strongest growth expected in the general aviation fleet is in the turboprop and jet areas. In the forecast, these segments are growing at 2.2 percent and 3.7 percent annually, respectively. Helicopter growth is expected to be low. This results in the jet fleet growing to 35.3 percent of the total at Lunken by 2022, while single-engine piston aircraft decline in share to 46.6 percent.

TABLE 2-4 Cincinnati Municipal Airport - Lunken Field BASED AIRCRAFT FLEET MIX FORECAST - BASELINE				
Forecast				
Equipment Type	2002	2007	2012	2022
Single Engine Piston	151	157	161	166
Twin Engine Piston	30	30	30	30
Multi-Turbo	19	23	26	30
Business Jet	60	78	94	123
Helicopter	2	3	3	3
Total	262	291	313	352
PERCENTAGE DISTRIBUTION				
Forecast				
Equipment Type	2002	2007	2012	2022
Single Engine Piston	57.6%	53.8%	51.4%	47.1%
Twin Engine Piston	11.5%	10.3%	9.6%	8.5%
Multi-Turbo	7.3%	7.9%	8.1%	8.4%
Business Jet	22.9%	26.9%	29.9%	35.0%
Helicopter	0.8%	1.0%	1.0%	1.0%
Total	100.0%	100.0%	100.0%	100.0%

Source: Cincinnati Municipal Airport, Lunken Field observations
 Federal Aviation Administration
 PB Aviation

2.5 General Aviation Cargo

The only cargo of significance at Lunken is that flown by AirNet and OnFlight Express, an air and ground courier of cancelled checks and small packages. This operation uses twin-engine piston aircraft such as the Beech Baron and the Piper Navajo. AirNet flies approximately 12-13 operations per night, four nights per week at the Airport. The first departure occurs in the 9:00 PM hour, and the last inbound flight occurs in the 9:00 AM hour. The operations tend not to cluster together. Thus, there is no hour of numerous operations at night driven by cargo operations. The amount carried by any one operation varies considerably, from little to no cargo, to as much as 1,000 pounds. It is estimated that the average is 400 pounds per operation. In a peaking sense, it is possible that one arrival and one departure will occur in the same hour, and that the maximum cargo handled might be 1,000 pounds on either of these operations.

On an annual basis, it is estimated that this cargo operation currently generates 2,600 operations annually, carrying 1,040,000 pounds of cancelled checks and small packages. These operations are included in the operations forecast for general aviation, and the fleet mix is included in the general aviation fleet mix. For the forecast, it is assumed that this cargo volume will increase at approximately one percent annually. This slow growth is influenced by the fact that electronic banking transactions are expanding and this will keep the growth in transportation of cancelled checks low. At this growth rate, cargo tonnage on this operation would reach:

<u>Year</u>	<u>Pounds</u>
2002	1,040,000
2007	1,093,100
2012	1,148,800
2022	1,269,000

The operations and fleet mix for cargo activity are embodied in the general aviation totals. No dedicated air cargo operations or air cargo facilities will be included in this study.

2.6 Aircraft Operations Peaking

In order to plan for adequate handling of activity at an airport, a planning day incorporates the average day of the peak month. The peak hour activity on that day is also a significant planning criterion. From 1998-2002, the specific peak month at Lunken has varied. Over that period, the peak month has averaged 10.3 percent of annual operations, as indicated on the following page.

Share of Annual		
<u>Year</u>	<u>Peak Month</u>	<u>Operations</u>
2002	August	10.0%
2001	June	10.7%
2000	August	10.3%
1999	September	10.0%
1998	October	10.3%
Average		10.3%

Source: Cincinnati Municipal Airport-Lunken Field

Assuming that a month has 30.5 days results in the average day, peak month operations estimates presented in **Table 2-5**. Average day peak month activity grows from 446 operations per day in 2002 to 634 daily operations in 2022. Jet operations grow from 103 per day in 2002 to 238 per day in 2022.

In order to estimate peak hour operations, discussions were completed with airport operators and data on operations by time of day were collected for a two-day sample in 2001. The data indicated that activity peaks at Lunken in the late afternoon. These observations are supported by the discussions with operators at the Airport. There is a flurry of departure activity in the morning as air taxi and

corporate aircraft depart. In the afternoon, there is a confluence of local aircraft returning, and visiting aircraft departing. The data indicates that during the peak hour, 10.7 percent of the day's activity occurs. The itinerant and local split is assumed to be consistent with the average split, and arrivals and departures during the peak hour are assumed to be equal. The fleet mix forecast during the peak hour is the same as that for the average day of the peak month. This results in peak hour activity as presented in **Table 2-6**. In the base year, there are 48 peak hour operations. This peak level increases to 68 operations by 2022.

TABLE 2-5				
Cincinnati Municipal Airport-Lunken Field				
AVERAGE DAY, PEAK MONTH OPERATIONS ACTIVITY				
	<u>2002</u>	<u>2007</u>	<u>2012</u>	<u>2022</u>
Annual Ops Total	132,214	148,954	162,247	187,742
Peak Month at 10.3%	13,618	15,342	16,711	19,337
Average Day Peak Month	446	503	548	634
Arrivals				
Itinerant 61%	136	153	167	193
Local 39%	87	98	107	124
Departures				
Itinerant 61%	136	153	167	193
Local 39%	87	98	107	124
Operations				
Equipment Type	<u>2002</u>	<u>2007</u>	<u>2012</u>	<u>2022</u>
Single Engine Piston	242	273	277	287
Twin Engine Piston	68	71	71	71
Multi-Turbo	23	24	25	27
Business Jet	103	125	164	238
Helicopter	9	9	9	9
Military	1	1	1	1
Total Daily Operations	446	503	548	634

Source: PB Aviation

TABLE 2-6 Cincinnati Municipal Airport-Lunken Field PEAK HOUR OPERATIONS ACTIVITY				
	<u>2002</u>	<u>2007</u>	<u>2012</u>	<u>2022</u>
Annual Ops Total	132,214	148,954	162,247	187,742
Peak Month at 10.3%	13,618	15,342	16,711	19,337
Average Day Peak Month	446	503	548	634
Peak Hour 10.7%	48	54	59	68
Arrivals				
Itinerant 61%	15	16	18	21
Local 39%	9	11	12	13
Departures				
Itinerant 61%	15	16	18	21
Local 39%	9	11	12	13
Operations				
Equipment Type	<u>2002</u>	<u>2007</u>	<u>2012</u>	<u>2022</u>
Single Engine Piston	26	29	30	31
Multi Engine Piston	7	8	8	8
Multi-Turbo	2	3	3	3
Business Jet	11	13	18	25
Helicopter	1	1	1	1
Military	0	0	0	0
Total Peak Hour Operations	48	54	59	68

Source: Cincinnati Municipal Airport, Lunken Field
PB Aviation

2.7 Potential Scheduled Commuter Service

Over the past several years, conversations have been conducted with several potential providers of scheduled passenger service at Lunken Field. None of these potential operators has actually initiated service. However, if such service were to materialize during the master plan forecast period it is necessary to understand how the facility could accommodate such activity. Therefore, this section hypothesizes what the level of such an operation might be.

Studies done for Lunken on the prospects for scheduled service have highlighted Chicago, Washington, D.C., St. Louis, Cleveland, and Detroit as possible destinations for such service. These cities are among the largest travel destinations for Cincinnati travelers. The appeal of Chicago as a destination for Lunken Field commuter service may have declined with the closing of Meigs

Field. This forecast assumes that service to one of St. Louis, Cleveland or Detroit is initiated by 2007 and, possibly, a second city is added by 2012. The start-up by 2007 is hypothesized because of the existence of recent discussions. An increase to two cities is likely in the first 5 years if the service is to be financially viable. The service hypothesized is that which would have to be sustained at a minimum to make the operation feasible. This scenario in no way implies that such service is actually financially viable or likely.

Service is hypothesized to be offered initially on 19-seat turboprop aircraft. Basic service would be two departures and two arrivals per weekday to one of the above cities. Two round trips per day would be necessary as a base service to allow a round trip in either direction in a single day. Weekday only service is hypothesized because it is assumed that such service would appeal primarily to business travelers. This implies 520 annual departures, or 1,040 annual passenger operations. A 60 percent load factor would be the minimum necessary to make the operations financially viable. This would imply 5,928 enplaned passengers annually in the start-up service scenario by 2007. By 2012, a second city might be introduced, doubling the activity to 1,040 annual departures, 2,080 annual operations, and 11,856 annual enplanements. By 2022, if this is a viable operation, growth might support service on 30-seat equipment. As indicated in **Table 2-7**, Aircraft operations levels would remain the same, but enplanements would grow to 18,720 annually. If Lunken Airport

TABLE 2-7 Cincinnati Municipal Airport-Lunken Field PASSENGER OPS AND FLEET MIX – SCHEDULED COMMUTER SERVICE								
Year Seats Per Departure Departures Per Year Operations Per Year Enplanements Per Year					Operations			
					19-Seat Aircraft		30-Seat Aircraft	
					% of Total	Number	% of Total	Number
2007	19	520	1,040	5,928	100.00%	1,040	0.00%	0
2012	19	1,040	2,080	11,856	100.00%	2,080	0.00%	0
2022	30	1,040	2,080	18,720	0.00%	0	100.00%	2,080

Source: PB Aviation

processes over 10,000 annual enplaned passengers, the reliever status of Lunken Airport to Cincinnati/Northern Kentucky International Airport (CVG) as it

relates to the FAA National Plan for Interrogated Airports (NIPAS) may require modification.

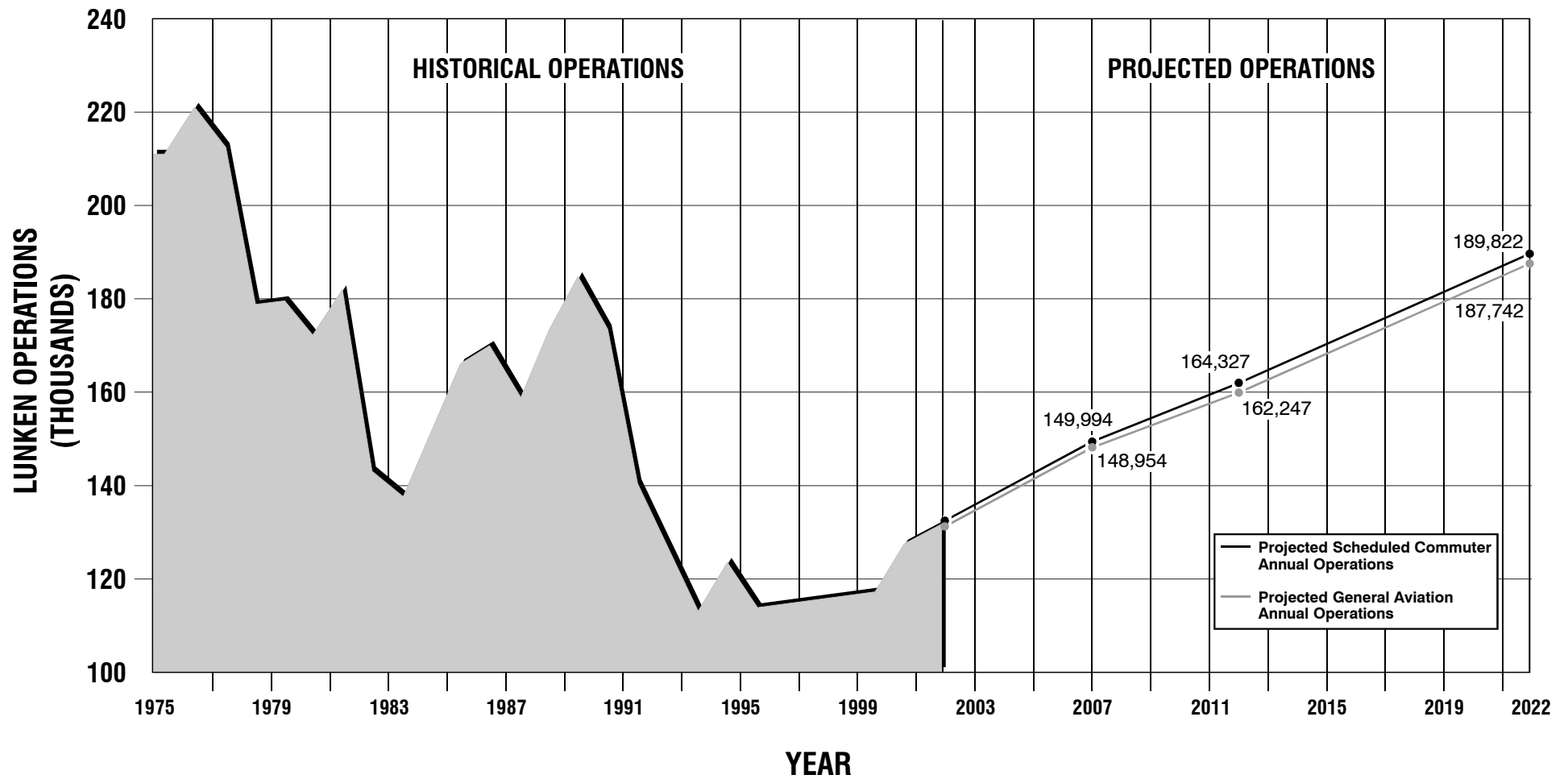
2.8 Projections Summary

A summary of the aviation demand projections is presented in **Table 2-8** and **Exhibit 2-3**. Total aircraft operations at Lunken Airport are expected to grow at an annual compounded growth rate of 1.8 percent while the number of based aircraft is expected to grow from an existing level of 262 to 352 by the end of 2022. The strongest growth is expected in the corporate market, particularly in the number of high performance twin-engine turbojet corporate aircraft operating at the Airport.

TABLE 2-8 Cincinnati Municipal Airport-Lunken Field ANNUAL AVIATION ACTIVITY SUMMARY				
	2002	2007	2012	2022
Based Aircraft	262	290	312	349
Operations				
Operation/Based Aircraft (GA Operations)	505	512	519	533
Piston Aircraft Operations	92,014	101,803	103,226	106,146
Turboprop Operations	6,764	7,180	7,472	8,092
Business Jet Operations	30,379	37,032	48,523	70,384
Other Operations	3,057	2,939	3,026	3,120
Total GA Operations	132,214	148,954	162,247	187,742
Scheduled Commuter Passenger Operations				
	2002	2007	2012	2022
19 Seat Turboprop	0	1,040	2,080	0
30 Seat Turboprop	0	0	0	2,080
Total Operations	0	1,040	2,080	2,080
Passenger Enplanements	0	5,928	11,856	18,720
Total GA & Scheduled Commuter Operations	132,214	149,994	164,327	189,822

Source: PB Aviation

The projected scheduled commuter passenger service is hypothesized to grow to four daily departures on a 30-seat turboprop. The peaking characteristics of this activity are presented in **Table 2-9**. Aircraft operations would be consistent throughout the year, at 8.5 percent each month. Passenger activity in the peak month is estimated at 9.7 percent of annual activity, which is the level seen in other passenger airport master plan studies. Initially, the peak hour would see



Cincinnati Municipal Airport - Lunkin Field
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PROJECTED TOTAL ANNUAL OPERATIONS

EXHIBIT
2-3

only one passenger departure. As activity increased, the peak departure hour is forecast to have 2 aircraft departures.

TABLE 2-9				
Cincinnati Municipal Airport - Lunken Field				
PEAKING ACTIVITY - SCHEDULED COMMUTER SERVICE				
Operations	2007	2012	2022	
Annual Passenger Ops Total	1,040	2,080	2,080	
Peak Month at 8.5%	88	177	177	
Average Day Peak Month Ops	3	6	6	
Peak Hour Departures	1	2	2	(Different Hour than Arrivals)
Peak Hour Arrivals	1	2	2	(Different Hour than Departures)
Passengers	2007	2012	2022	
Annual Enplanement Total	5,928	11,856	18,720	
Peak Month at 9.7%	575	1,150	1,816	
Average Day Peak Month Enplanement	19	38	60	
Peak Hour Enplanements	14	25	39	(Different Hour than Deplanements)
Peak Hour Deplanements	14	25	39	(Different Hour than Enplanements)
Fleet Mix	2007	2012	2022	
Peak Hour Arrivals				
19-Seat Turboprop	1	2	0	
30-Seat Turboprop	0	0	2	
Peak Hour Departures				
19-Seat Turboprop	1	2	0	
30-Seat Turboprop	0	0	2	

Source: Cincinnati Municipal Airport, Lunken Field
PB Aviation